EC TYPE-EXAMINATION (MODULE B) CERTIFICATE

Marine Equipment Directive (MED) 2014/90/EU

PHOENIX TESTLAB

Notified Body Number 0700

Recognised by BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE **0800S11/4822/007**

This is to certify that:
PHOENIX TESTLAB did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the schedule attached hereto.

Certificate No.	PTL-MED-B-25-110811 - 25-121620
Manufacturer	Saab TransponderTech AB
Address	Låsblecksgatan 3 58941 Linköping, SWEDEN
Directive Reference **(No & Item designation)**	Directive 2014/90/EU, Regulation (EU) 2024/1975 MED/4.63 (Row 3 of 3): GPS Equipment, DGPS Equipment
Product Description	R6 Navigation System
Brand Name / Model Name	R6 DGNSS Navigation System / R6 GNSS Navigation System / R6 DGNSS PRO Navigation System / R6 NAV NEO / R6 NAV PRO Compass System / R6 NAV PRO Compass+ System

Regulation SOLAS 74, as amended
Regulations V/18, V/19, X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87), IMO Res.MSC.112(73), IMO Res.MSC.114(73)

Testing Standards

IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008)	IEC 62923-1 Ed. 1.0 (2018)
IEC 61162-1 Ed. 5.0 (2016)	IEC 62923-2 Ed. 1.0 (20188)
IEC 61162-2 Ed. 1.0 (1998)	IEC 61108-1 Ed. 2.0 (2003)
IEC 61162-450 Ed. 2.0 (2018)	IEC 61108-4 Ed. 1.0 (2004)
IEC 62288 Ed. 3.0 (2021)	

Date of issue:	**2025-06-05**	Expiry date:	**2030-06-04**
USCG Approval Category:	**165.130 (GPS)**	**165.132 (DGPS)**	

This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with.

The attached Schedule of Approval forms part of this certificate. This certificate consists of 5 pages.

Seal

Klaus Knörig
6/5/2025

Signed by Klaus Knörig
Notified Body

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Schedule of Approval

Components necessary for operation

Component	Name	Part No.	Software Version *)
GNSS Sensor **)	R5 NAV GNSS Sensor MkIII	7000 118-910	1.4.x / 1.5.x
DGNSS Sensor **	R5 NAV DGNSS Sensor MkIII	7000 118-911	1.4.x / 1.5.x
DGNSS Sensor **)	R5 NAV DGNSS PRO Sensor MkIII	7000 118-912	1.4.x / 1.5.x
DGNSS Sensor **)	R5 NAV DGNSS PRO RTK Sensor MkIII	7000 118-913	1.4.x / 1.5.x
DGNSS Sensor **)	R6 NAV PRO Compass	7000 125-500	1.5.x
Display	R6 CDU	7000 123-500	1.1.x / 1.2.x
GNSS Antenna ***)	MGA-3	7000 000-554	N/A
DGNSS Antenna (Combined GNSS / Beacon) ***)	MGL-5	7000 000-555	N/A
DGNSS Antenna (Combined GNSS / Beacon) ***)	A31 Antenna	7000 000-780	N/A
DGNSS Antenna (Combined Multi-Frequency GNSS / Beacon) ***)	A43 Antenna	7000 000-651	N/A
CRPA GNSS Antenna System ***)	NavProtect M	---	N/A

*) The first two digits in the Software Version indicate Major revisions (1.0, 1.1, etc.), whereas “x” represents Minor revision numbers (0, 1, 2, etc.) with no impact on type approved functionality. (“N/A” means there is no software in the component.)
**) In the navigation system, only one of the sensors shall be used.
***) In the navigation system, only one of the antennas shall be used.

Optional Components

Component	Name	Part No.	Software Version*
Communication Unit	C6 COM	7000 125-702	1.0.0
Inertial Measurement Unit	I6 IMU	7000 125-602	1.0.0
Power Supply	I6 UPS	7000 125-800	N/A

*) The first two digits in the Software Version indicate Major revisions (1.0, 1.1, etc.), whereas “x” represents Minor revision numbers (0, 1, 2, etc.) with no impact on type approved functionality. (“N/A” means there is no software in the component.)

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Approval documentation

Operation and Installation Manuals	R6 Navigation System Operation & Installation Manual, 7000 125-304, P9C1 7000 125-306, A1, I6 IMU Manual 7000 125-810, A1, U6 UPS Manual 7000 125-305, A1, C6 COM Manual Component Manual / Technical Manual NavProtect M CRPA System, Doc. No D0207938.001, 2024-01-19
General description	R6 Navigation System, general description for module B approval
Data sheet	A31 Antenna datasheet-201804-sti
Mechanical drawings	R5 NAV Chassis, 7000 118-750 R5 NAV Top Cover, 7000 118-751 R5 NAV Sensor Board Cover, 7000 118-752 804-3057-0_B1 A31 dimensions mechanical MD_7000 000-555, A2, MGL-5
PCB Mounting drawing	R5 NAV Sensor Board Mounting drawing, 7000 118-712
Block Diagram and Schematics	R5 NAV Sensor Board Block Diagram and Schematics, 7000 118-715
PCB layout	R5 NAV Sensor Board PCB, 7000 118-716
Parts List	R5 NAV Sensor Board BOM, 7000 118-713
Software Version	PT-20-0323, A1, List of changes R5 Navigation System MkII SW 1.4, 2020-02-24, Issue A1
Risk Assessment	R6 NAV Risk Assessment, Doc Id. PT-23-0148, B1, 2024-06-28
Product Label	R5 Product Revision Label, 7000 118-308, B2
	R5 Navigation Sensor HW Label, 7000 118-767, A1
	R6 Product Label specification, 7000 121-300, A1
	R5 Navigation Sensor Product Label, 7000-118-768, A1
	R6 NAV PRO Compass Labels
Statements	R5 NAV Pro Statement, Doc. Id. R5 Nav-17-065, Issue B1, 2019-08-16
	A31 and A32 DGNSS Declaration Letter, 2021-06-30 Phantom 34 - Temperature specification, 2022-03-01
	PT-24-0208, A1, 2024-06-28, Statement Difference between R5 and R6 Navigation Sensors/Compasses
	PT-24-0232, A1, List of changes R6 Navigation and Supreme System SWs Introduction of NEO PT-25-0122, A1, Statement R6 Compass System downscale of NEO

Applied Standards and Test Reports

Specification	Laboratory	Test Report Number / Version
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) EMC tests	PHOENIX TESTLAB	F161552E1, 2016-10-24
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) EMC tests	PHOENIX TESTLAB	F211774E2, 2022-04-05
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) EMC tests	EMCC DR. RASEK	830038.17MB, 2023-10-02
EN 60945:2002 C1 2008	TÜV SÜD	75960843-02 Issue 01, 2024-06-25

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Specification	Laboratory	Test Report Number / Version
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Environmental tests	PHOENIX TESTLAB	U161552E1, 2016-09-16
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Environmental tests	PHOENIX TESTLAB	U211774E1, 2022-03-28
IEC 61108-1 Ed. 2.0 (2003) IEC 61162-1 Ed. 5.0 (2016) IEC 61162-2 Ed. 1.0 (1998)	BSH	BSH/4542/001/4143072/16, 2017-04-04
IEC 61162-450 Ed. 2.0 (2018)	BSH	BSH/4542/001/4143261/18, 2019-01-18
IEC 61108-1 Ed. 2.0 (2003)	BSH	BSH/454.GNSS/001/000003, 2022-03-30
IEC 61108-1 Ed. 2.0 (2003)	BSH	BSH/454.GNSS/001/000004, 2022-03-30
IEC 61108-4 Ed. 1.0 (2004)	BSH	BSH/4615/4120131/05, 2006-07-12
IEC 62288 Ed. 2.0 (2014) Sections 4, 7 IEC 60945 Ed. 4.0 (2002) incl. Corr.1 (20028), Section 6.1, 6.2	BSH	BSH/454.AIS-A/Saab R6 Supreme/1_d, 2022-06-30
IEC 62288 Ed. 3.0 (2021) Section 4 IEC 60945 Ed. 4.0 (2002) incl. Corr.1 (20028), Section 6.1, 6.2	BSH	BSH/454.GNSS/011/00002/00004, 2023-03-15
IEC 62288 Ed. 3.0 (2021) Section 4 IEC 60945 Ed. 4.0 (2002) incl. Corr.1 (20028), Section 6.1, 6.2	BSH	BSH/454.AIS-A/Saab R6 Supreme/1, 2024-09-16
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008), Section 11.2 Compass safe distance	BSH	Certificate No 1113, 2022-03-28
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008), Section 11.2 Compass safe distance	BSH	Certificate No 959, 2016-12-08
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) EMC and Environmental tests	Mariner Systems (UK)	Test Report TL1316, 2009-06-29
IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) EMC and Environmental Statement of Conformity	BSH	BSH/46162/0041553/11, 2011-03-10
IEC 62923-1 Ed. 1.0 (2018) IEC 62923-2 Ed. 1.0 (2018)	SAAB	PT-019-0113, Issue A1, 2019-06-19
IEC 62923-1 Ed. 1.0 (2018) IEC 62923-2 Ed. 1.0 (2018)	SAAB	PT-022-0265, Issue A1, 2022-09-14
IEC 62923-1 Ed. 1.0 (2018) IEC 62923-2 Ed. 1.0 (2018)	SAAB	PT-022-0361, Issue A1, 2023-02-07

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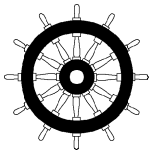
Limitations / Restrictions

- None -

Notes

1. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with PHOENIX TESTLAB.

2. During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards of the Commission Implementing Regulation may change, therefore the product conformity may need to be re-assessed by the Notified Body.

3.  The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

U.S. Coast Guard Approval

This equipment is covered by the scope of the “Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment” signed February 27th, 2004 and amended by Decision No.1/2008 dated February 18th, 2019 according to U.S. Coast Guard approval categories 165.130, 165.132.
A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F) as allowed by the MRA.

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